## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Kenjiro OKAGUCHI et al.

International Application No.: PCT/JP2004/013072

Serial No.: Currently unknown

Filing or 371(c) Date: Concurrently herewith

Title: OSCILLATOR CIRCUIT INCLUDING SURFACE ACOUSTIC WAVE SENSOR AND

**BIOSENSOR APPARATUS** 

International Filing Date: September 8, 2004

### PRELIMINARY AMENDMENT

Mail Stop PCT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Prior to examination on the merits of the above-identified patent application, Applicants respectfully request entry and consideration of the following Amendment:

- Amendments to the Specification begin on page 2 of this paper.
- Amendments to the Drawings begin on page 5 of this paper and include an attached replacement sheet.
- Amendments to the Claims are reflected in the listing of the claims which begins on page 6 of this paper.
- Remarks/Arguments begin on page 8 of this paper.

Please note, if a box is not checked, then no corresponding amendment is being made.

U.S. Patent Application No.: Unknown

April 7, 2006 Page 2 of 10

## **AMENDMENTS TO THE SPECIFICATION:**

A substitute specification and a marked-up copy of the English translation of the originally filed PCT application are attached hereto.

Please replace the Title of the Invention originally filed with the above-identified patent application with the following <u>new</u> Title:

OSCILLATOR CIRCUIT INCLUDING SURFACE ACOUSTIC WAVE SENSOR
AND BIOSENSOR APPARATUS

U.S. Patent Application No.: Unknown

April 7, 2006 Page 3 of 10

# **IN THE ABSTRACT:**

Please replace the Abstract of the Disclosure originally filed with the aboveidentified patent application with the following <u>new</u> Abstract of the Disclosure:

U.S. Patent Application No.: Unknown

April 7, 2006 Page 4 of 10

#### ABSTRACT OF THE DISCLOSURE

A surface-acoustic-wave-sensor-included oscillator circuit does not cause separation of an electrode film due to application of a bias voltage and can reliably accurate operate even if liquid is adhered thereto. The surface-acoustic-wave-sensor-included oscillator circuit includes interdigital electrode disposed on a piezoelectric substrate and a reaction film that is arranged so as to cover the interdigital electrodes and bound to a target substance or a binding material to be bound to the target substance. A surface acoustic wave sensor that is capable of detecting a bit of mass loading on the basis of a variation in frequency is connected as a resonator in the surface-acoustic-wave-sensor-included oscillator circuit. Direct-current cutting capacitors are connected in series to the surface acoustic wave sensor, and the direct-current cutting capacitors respectively define impedance matching circuits in the surface-acoustic-wave-sensor-included oscillator circuit.

U.S. Patent Application No.: Unknown

April 7, 2006 Page 5 of 10

# **AMENDMENTS TO THE DRAWINGS:**

The attached sheet of Drawings includes changes to Figs. 10, 11 and 12. This sheet, which includes Figs. 10, 11 and 12, replaces the original sheets including Figs. 10, 11 and 12.

Attachment: two (2) Replacement Sheets.